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| 10/528,965 | 02/13/2006 | David Taubman | HAK-100-A | 9052 |

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| EXAMINER |
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ROBERTS, JESSICA M

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| ART UNIT | PAPER NUMBER |
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2621

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06/01/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@youngbasile.com
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| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/528,965 | Applicant(s) TAUBMAN ET AL. | |
| | Examiner JESSICA ROBERTS | Art Unit 2621 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,33 and 34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,33 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/29/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

2. Claims 1, 33, and 34 objected to because of the following informalities:
3. Regarding claim 1, the term "singalling" is misspelled and should be corrected to "signaling".
4. Regarding claim 33, the term "singalling" is misspelled and should be corrected to "signaling".
5. Regarding claim 34, the term "singalling" is misspelled and should be corrected to "signaling".
6. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. Claims 1 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Regarding claims 1 and 33, the term "incremental contributions" renders the claim indefinite. It is unclear what is to be considered "incremental contributions". As best understood by the Examiner, incremental contributions are the base and enhancement layers.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim(s) 1 is/are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent¹ and recent Federal Circuit decisions² indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method

¹ *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

² *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

Art Unit: 2621

steps, and therefore do not qualify as a statutory process. For example, the method for incrementally coding which includes the steps of "producing an embedded bitstream" and "interleaving incremental contributions" is of sufficient breadth that it would reasonably be interpreted as a series of steps completely performed mentally, verbally, or without a machine.

The Applicant has provided no explicit and deliberate definitions to tie the method which includes the steps of "producing an embedded bitstream" and "interleaving incremental contributions" to limit the steps to a particular apparatus or device.

Drawings

10. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 1 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Han et al., US-6,845,130 in view of Wu et al., US-6,700,933.

Regarding **claim 1**, Han teaches a method for incrementally coding and signalling motion information for a video compression system involving a motion adaptive transform and embedded coding of transformed video samples, said method comprising the steps of: (a) producing an embedded bit-stream, representing each motion field in coarse to fine fashion (column 3 line 20-23). Han is silent in regards to interleaving incremental contributions from said embedded motion fields with incremental contributions from said transformed video samples.

However, Wu teaches interleaving incremental contributions from said embedded motion fields with incremental contributions from said transformed video samples (FIG. 4 conceptually illustrates a PFGS layered coding scheme 100 implemented by the video encoder 80 of FIG. 3. The encoder 80 encodes frames of video data into multiple layers, including a base layer and multiple enhancement layers. For discussion purposes, FIG. 4 illustrates four layers: a base layer 102, a first layer 104, a second layer 106, and a third layer 108. The upper three layers 104-108 are enhancement layers to the base video layer 102. The term layer here refers to a spatial layer or SNR (quality layer) or both. Five consecutive frames are illustrated for discussion purposes, column 6 line 55-65 and fig. 4).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Wu with Han for improving image quality.

Regarding **claim 33**, this is the corresponding system of the method in claim 1. Thus the analysis and rejection made in claim 1 also applies here.

14. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (AAPA) in view of Guichard et al., US-5909251.

Regarding **claim 34**, AAPA teaches a system for estimating and signalling motion information for a motion adaptive transform based on temporal

Art Unit: 2621

lifting steps, said system comprising: (a) means for estimating and signalling motion parameters describing a first mapping ([0016]). AAPA is silent in regards to mapping a source frame onto a target frame within one of the lifting steps; and (b) means for inferring a second mapping between either said source frame or said target frame, and another frame, based on the estimated and signalled motion parameters associated with said first mapping.

However, Guichard teaches mapping a source frame onto a target frame within of the lifting steps (column 3 line 65-67), means for inferring a second mapping between either said source frame or said target frame, and another frame based on the estimated and signalled motion parameters associated with said first mapping (column4 line 50-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Guichard with AAPA for providing improved image quality.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA ROBERTS whose telephone number is (571)270-1821. The examiner can normally be reached on 7:30-5:00 EST Monday-Friday, Alt Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2621

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/
Supervisory Patent Examiner, Art Unit 2621

/Jessica Roberts/
Examiner, Art Unit 2621